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AUTHOR	Carstens, Arthur; And Others
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ABSTRACT

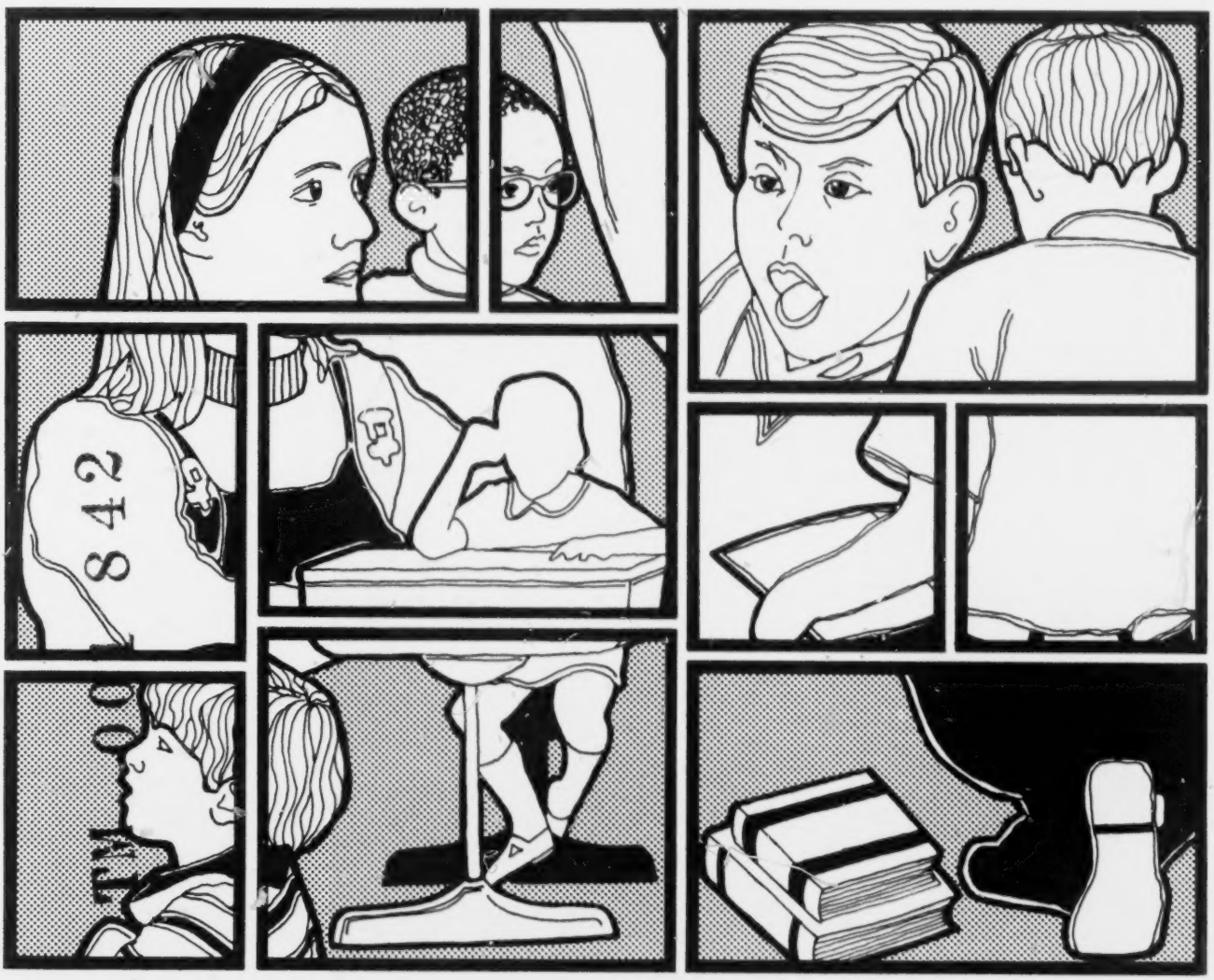
Third in the 1971-72 series, the report provides local school district officials with information regarding their own school districts and its schools as assessed by the Michigan Educational Assessment Program. The information can assist local officials in making decisions regarding the allocation of resources and the design of educational programs. It also provides a general indication of areas within the local school district which may need closer study. Specific evaluations of the areas so identified can be initiated by local school people. The three sections of the report present (1) precautions and statistical terms necessary for the interpretation of the educational assessment data; (2) listing of educational assessment measures and a description of the district and school reports; and (3) norm tables and education profiles. (LH)

ED 068504

local district and school report: explanatory materials

THE THIRD REPORT OF THE 1971-72 MICHIGAN EDUCATIONAL ASSESSMENT PROGRAM

MICHIGAN DEPARTMENT OF EDUCATION MAY 1972



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LOCAL DISTRICT AND SCHOOL REPORT: EXPLANATORY MATERIALS

The third report of the 1971-72
Michigan Educational Assessment Program

Prepared by Research, Evaluation and Assessment Services

Michigan Department of Education

May, 1972

FOREWORD

The Michigan Educational Assessment Program was initiated by the State Board of Education, supported by the Governor, and enacted by the Legislature initially through Act 307 of the Public Acts of 1969 and subsequently under Act 38 of the Public Acts of 1970.

The purpose of this report, the third in the 1971-72 series, is to provide local school district officials with information regarding their own school district and its schools.

Assessment of educational needs is the third step of a six-step process adopted by the State Board of Education as a guide or model for improving Michigan education. The assessment information in this report can assist local district officials in making local decisions regarding the allocation of resources and the design of educational programs. It also provides a general indication of areas within the local school district which may need closer study. Specific evaluations of the areas so identified can be initiated by local school people.

Thanks are due to a large number of individuals and groups for making the Michigan Educational Assessment Program a reality and for supporting it through its first three years. Michigan educators have given particularly valuable assistance. The program was designed and administered by the Research, Evaluation and Assessment Services, Michigan Department of Education, with the assistance of Educational Testing Service of Princeton, New Jersey, and the counsel of several ad hoc advisory groups.

This report was prepared by Mr. Arthur Carstens, Dr. David Donovan, Mr. Robert Huyser, Dr. Philip Kearney, Mrs. June Olsen, and Dr. Daniel E. Schooley. Questions or requests for additional information relative to this report should be directed to the educational assessment staff.

John W. Porter
Superintendent of
Public Instruction

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INTRODUCTION

By following the procedures described in this booklet, local school officials will be able to construct education profiles which will enable them to relate their district and schools to groups of other districts and schools throughout Michigan, and in their community type.[1] These profiles will also enable school officials and citizens to identify the levels of educational performance in selected basic skills areas and the levels of factors related to performance in their district and schools.

This explanatory booklet has three sections.

1. The first section states precautions which must be considered in using and interpreting the assessment data. It also defines certain statistical terms which are necessary for proper interpretations of the data.

2. The second section lists the assessment measures and introduces the computer printouts which contain the local district and school data.

3. The third section describes the norm tables that are provided with this report and explains how to construct and interpret district-level and school-level education profiles.

It also should be noted that Appendix A contains a listing of Michigan school districts classified according to community type; Appendix B contains the definitions of the educational assessment measures.

By careful reading of this explanatory booklet, local school officials will be able to construct and interpret education profiles for their own districts and schools.

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[1]The new community type definitions and classifications used in the 1971-72 Michigan Educational Assessment Program were determined in the fall of 1971 and employ 1970 U.S. Census data. These definitions and a list of districts by community type can be found in Appendix A of this booklet.

SECTION I

PRECAUTIONS AND STATISTICAL TERMS NECESSARY FOR THE INTERPRETATION OF THE EDUCATIONAL ASSESSMENT DATA

The data presented in the school and district printouts that accompany this booklet could help to identify pupil and school building educational needs and therefore, when used along with other needs assessment data, could lead to improved educational decision-making at the local level. This section of the report is divided into two parts. Part 1 states several precautions which must be taken in the construction and interpretation of the education profiles. Part 2 defines selected statistical terms which the reader will need to know in order to interpret the data.

Part 1

Precautions in the Use of Assessment Data

This part discusses the following precautions: relationships among assessment variables, relationships to local programs, value of other data, accuracy of district and school means, comparisons with 1970-71 educational assessment results, and construction of norm tables.

Relationships Among Educational Assessment Variables

Recent research indicates that certain characteristics of students' background--including their relative socioeconomic status, attitudes, and aspirations--are related to achievement. Research also indicates a moderate relationship between qualities of the instructional staff and achievement. In addition, available information has shown that the amount of financial resources spent by a district bears a relationship to achievement levels because schools with more financial resources are generally able to provide

a greater variety of instructional programs and support for the teaching staff.[2]

It must be understood that previous research has been conducted on large samples of school districts and schools. Therefore it must not be assumed that these relationships among achievement and other variables would be apparent in all individual district and school reports which are being provided to Michigan school officials. Moreover, it must be understood and emphasized that causal relationships have not been demonstrated, either by the previous research or by the Michigan Educational Assessment Program data.

Appropriateness of the Test to Local Programs

The educational assessment results provide a general measure of the basic skills achievement levels of each pupil compared to the basic skills achievement levels of all pupils throughout the state. In assembling the assessment battery an effort has been made to focus on the broader outcomes sought by all schools in reading, the mechanics of written English, and mathematics. However, regardless of how representative the test questions may be, they may not match the programs of every district and school equally well. A poor fit between a sub-test's content and a particular school's program in that subject may tend to lower the scores of pupils on the sub-test and on composite achievement, hence lowering the school's and district's mean scores as well. Conversely, a better-than-average fit may raise the scores and averages.

Value of Other Data

Care must be taken not to interpret educational assessment scores in isolation when comparing schools and school districts. It must be remembered that other relevant school and community data (e.g., population mobility, educational

[2]For a report and discussion of research which deals with the influence of non-school factors, e.g., socioeconomic status and attitudes and aspirations, refer to Research into the Correlates of School Performance: A Review and Summary of Literature. (Lansing, Michigan: Michigan Department of Education, Assessment Report No. 3, 1970).

attitudes and aspirations of the community, density and sparsity of population, etc.) are important in making inferences from the educational assessment results. Basic skills levels alone may not provide adequate comparisons of districts, especially if the districts are not similar on other factors.

Accuracy of District and School Means

District and school means can be subject to error for a variety of reasons. Two reasons in particular should be noted. First, when making interpretations of assessment data it is important to bear in mind the magnitude of possible errors that may creep into the measures used, thus lowering their ability to produce meaningful and trustworthy information. For example a district or school mean in reading will tend to contain little error if the group of pupils taking the test in a district or school is large and representative. But if the number of pupils tested in a district or school is small--say thirty--the absence of several good readers could have an effect on the mean reading score for that district or school. Lack of representativeness in the mean scores of a district or school may also arise from the variation in performance from grade to grade that may occur in small districts or schools. Thus, to the extent that the grades tested are not typical of the general school enrollment, the results will not faithfully reflect the performance of all pupils in the district or school.

A second potential source of error in district and school means is unreliability in the individual scores upon which the means are based. The basic skills achievement test scores reported in the Michigan Educational Assessment Program are accurate enough to warrant the reporting of individual pupil scores and thus produce highly reliable group scores. Socioeconomic status (SES) results, however, are group estimates and not sufficiently reliable

to produce dependable individual scores. The results have been regarded by measurement experts as sufficiently reliable for reporting district and school mean scores.

Safeguards Against Error

Great care is taken to prevent errors in preparing assessment reports. Steps are included to confirm the accuracy of scoring the tests, converting to standard scores, matching with data from state records, and mailing reports. Although these steps prevent most errors, a remote possibility exists that a specific error will escape detection. If you find reason to question any part of your report, please contact a member of the Assessment Program staff. Because of space limitations, it is impossible for Educational Testing Service to retain answer sheets indefinitely. Therefore, questions about the accuracy of means based on pupil scores must be raised within nine months after the testing.

Comparisons with Previous Educational Assessment Results

The educational assessment data contained in this report should be compared with last year's assessment data only in terms of rank among other districts and schools. A future educational assessment report will present equated standard scores which will be directly comparable to the standard scores obtained in previous years of the Michigan Educational Assessment Program.

Construction of Norm Tables

The prime reference group for interpreting district mean scores and other data aggregated at the district level should be similar data on all K-12 districts in the state as reflected in the district norm tables. Similarly, the prime reference group for interpreting school mean scores and other data aggregated at the school level should be similar data on all schools testing at the appropriate grade level in Michigan K-12 districts as reflected in the school

norm tables.

In constructing the education profiles, care should be taken not to use school mean scores with district norm tables or district mean scores with school norm tables. Since the norming populations are different, a mean score falls at a different percentile on the school norm table than on the district table. Thus the district's or school's education profile could be inadvertently misrepresented and interpreted incorrectly. Furthermore, only the district norm table provides information for interpreting all of the data aggregated at the district level.

Additional understanding of district and school means can be obtained by also consulting a table of pupil norms. With a table of pupil norms one can answer the question: "Where would a pupil rank among other pupils if he had a standard score equal to our district or school mean?" Statewide pupil norm tables have been prepared for this purpose, but to prevent possible misunderstanding as to their intended use they are not provided routinely. They are, however, available on request from Research, Evaluation and Assessment Services. Their availability is experimental, in the hope that their use by local school officials will illuminate rather than confuse the meaning of the test results.

Part 2

Statistical Terms

Statistical terms used in this report are defined below to assist the reader in interpreting the data. These definitions are substantively the same as used in prior educational assessment program reports.

Mean

A mean score is an average of a set of scores and is obtained by adding

all of the scores in the set and dividing the sum by the total number of scores.

Median

The median is that point in a range of scores above which are exactly half the scores and below which are the other half. Thus, the median is that point in the "middle" of a distribution of scores.

Standard Deviation

In addition to establishing a mean for a distribution of scores, it is often useful to know the "spread" of the scores. Two groups of scores could have the same mean but the "spread" still be quite different. For example, one district might have pupils whose scores on composite achievement cluster close together and have a mean of fifty. In this district, the "spread" of scores would be small. Another district might have a number of pupils with high scores and a number of pupils with low scores and still have a mean of fifty. In this district, however, the "spread" of scores would be large.

One common way of indicating the "spread" of scores is to calculate a standard deviation. The standard deviation will indicate how much "spread" there is in the distribution of scores on which it was calculated. Usually about two-thirds of the scores will fall between one standard deviation above and one standard deviation below the mean. The larger the standard deviation, the larger will be the "spread" or variability in the scores of a distribution. In the example above, the district with the mixture of high and low scores would have a larger standard deviation than would the district with scores that fell close together. It should also be noted that a distribution of district mean scores has a smaller standard deviation than a distribution of school or pupil scores.

Standard Scores

Standard scores are scores that are derived from "raw" or response scores using the mean and standard deviation. In the Michigan Educational Assessment Program, standard scores were developed so that a pupil's scores on the different tests could be expressed in similar units for ease in comparison. Pupil scores are expressed in units that yield a mean of 50 and a standard deviation of ten when computed for all public school pupils at the same grade level in 1971-72. For example, a pupil with a standard score of 40 on reading was one standard deviation below the state mean; a pupil with a standard score of 60 was one standard deviation above the mean; a pupil with a standard score of 65 was one and one-half standard deviations above the mean, and so forth.

Percentile Distribution

A percentile distribution is a ranking of entries (e.g., scores, ratios, means, etc.) which is divided into 100 equal parts. Each part has an equal number--one percent--of the total number of entries. For example, a district mean score at the 50th percentile in a distribution of districts mean scores would be at the median--or middle--of the distribution. A district score at the 75th percentile would be above 75 percent--and below 25 percent--of the district mean scores in the distribution. In a typical distribution, 50 percent of the scores are above--and 50 percent are below--the median.

Decile Distribution

A decile distribution is a ranking of scores which is divided into ten equal parts. Each part has an equal number--ten percent--of the total number of scores. When deciles are computed on a statewide basis, ten percent of the

the state's pupil will fall into each decile. Pupils in the first decile on composite achievement constitute the lowest scoring ten percent of the pupils tested throughout the state. Pupils in the tenth decile on composite achievement constitute the highest ten percent of the pupils tested. District and school decile distributions are valuable because they can show whether the scores of pupils in the district or school are concentrated in one part of the score distribution or another, or scattered more evenly throughout the range of possible decile scores.

SECTION II

LISTING OF EDUCATIONAL ASSESSMENT MEASURES AND A DESCRIPTION OF THE SCHOOL AND DISTRICT REPORTS

This section consists of two parts. Part 1 lists the educational assessment measures which are presented in this booklet. (A definition of these assessment measures is included in Appendix B.) Part 2 presents a description of the Local School and District Reports which accompany this document.

Part 1

Listing of Educational Assessment Measures

For the reader's convenience, the twenty-two measures reported in the Michigan Educational Assessment Program are listed in Table I. These measures are grouped into six major categories: (A) Human Resources; (B) District Financial Resources; (C) Student Background; (D) Dropout Rate; (E) Achievement; and (F) Size Measures. Those measures which are newly added since the 1970-71 educational assessment program are indicated by an asterisk (*). Measures substantially changed since the 1970-71 program are indicated by a square (□). Sources of the information used to compute each measure are identified in Appendix B.

Table I lists the twenty-two measures which are reported at the district level. Table I also identifies the fifteen measures which are reported at the school level. The remaining seven measures were unavailable at the school level and could only be reported at the district level.

Part 2

Description of the District and School Reports

As indicated earlier there are six categories and twenty-two measures reported in the 1971-72 Michigan Educational Assessment Program. The following

TABLE I

A LIST OF THE TWENTY-TWO MEASURES REPORTED
AT THE DISTRICT OR SCHOOL LEVELS

MEASURES	DISTRICT	SCHOOL
A. Human Resources		
(1) Professional Instructional Staff per 1,000 Pupils□	X	X
(2) Teachers per 1,000 Pupils□	X	X
(3) Average Years Teaching Experience□	X	X
(4) Percent of Teachers with Master's Degree or Above	X	X
(5) Average Contracted Salary per Teacher□	X	X
B. District Financial Resources		
(6) State Equalized Valuation per Resident Member (1970-71)	X	
(7) Local Revenue per Pupil (1970-71)	X	
(8) State School Aid per Pupil (1970-71)	X	
(9) K-12 Instructional Expense per Pupil (1970-71)	X	
(10) Elementary Instructional Expense per Pupil (1970-71)*	X	
(11) Total Current Operating Expense per Pupil (1970-71)	X	
C. Student Background		
(12) Percent of Racial-Ethnic Minority Students	X	X
(13) Composite Estimate of Socioeconomic Status□	X	X
D. Dropout Rate		
(14) School Dropout Rate (1970-71)□	X	
E. Achievement (Provided separately for grades 4 and 7)		
(15) Word Relationships	X	X
(16) Reading	X	X
(17) Mechanics of Written English	X	X
(18) Mathematics	X	X
(19) Basic Skills Composite Achievement	X	X
F. Size Measures		
(20) Grade 4 Membership*	X	X
(21) Grade 7 Membership*	X	X
(22) Total Membership□	X	X

*This measure is new since the 1970-71 educational assessment program

□This measure has been substantially changed since the 1970-71 educational assessment program.

NOTE: Undated measures are based on 1971-72 data.

description uses Michville as a hypothetical school district and Able as a hypothetical school building within the Michville district. The illustrative tables in this report contain fictitious data for this district and school. The measures are arranged in the six groups shown in Table I. Similar categories are used throughout the report.

In the Local District Report (Table II) most measures are shown as either simple ratios, years, percentages, or dollars. The 13th measure, composite estimate of socioeconomic status, is expressed as an estimated average standard score. Measures 15 through 19 make up the Achievement category and summarize the scores of the pupils tested throughout the district. Shown for each measure are the mean of the pupil scores in the district, their standard deviation, and the number of pupils tested. These statistics are reported for both the fourth and seventh grades. The last three measures, 20 through 22, are Size Measures and are reported as head counts. They are located below the district name, code number and community type on the right side of the report form. At the bottom of the table are decile distributions of composite achievement for all pupils in the district who completed the battery.

The format of the Local School Report (Table III) is like that of the Local District Report. Lacking financial resource and dropout measures, the Local School Report contains only fifteen measures. The Size Measures for the school appear on the right, below the school and district name and code numbers. Again, some measures are expressed as ratios and percentages, while the five Achievement Measures are described by the mean score, standard deviation and number of pupils tested. Like the district report, the Local School Report concludes with a decile distribution of composite achievement scores by grade for the pupils who completed the battery.

1971-72 Michigan Educational Assessment Program

LOCAL DISTRICT REPORT

SCHOOL DISTRICT MICHVILLE PUBLIC SCHOOL CODE NUMBER 86-010

COMMUNITY TYPE III TOWNS

SIZE MEASURES: Total Membership 1,096

Grade 4 membership* 90 Grade 7 membership* 85

TABLE II

HUMAN RESOURCES

Professional instructional staff per 1,000 pupils ☐	54.6
Teachers per 1,000 pupils ☐	43.2
Average years teaching experience ☐	9.4 Yrs
Percent of teachers with master's degree or above	9.7%
Average contracted salary per teacher ☐	$9,483

DISTRICT FINANCIAL RESOURCES

State equalized valuation per resident member (1970-71)	$15,590
Local revenue per pupil (1970-71)	346
State school aid per pupil (1970-71)	290
K-12 instructional expense per pupil (1970-71)	381
Elementary instructional expense per pupil (1970-71)*	330
Total current operating expense per pupil (1970-71)	598

STUDENT BACKGROUND

Percent of racial-ethnic minority students	28.2%
Composite estimate of socioeconomic status ☐	49.6

DROPOUT RATE

School dropout rate (1970-71) ☐	3.3

ACHIEVEMENT (PROVIDED SEPARATELY FOR GRADES 4 AND 7)

DISTRICT MEANS, STANDARD DEVIATIONS, AND NUMBER TESTED

	GRADE FOUR			GRADE SEVEN		
	Mean	Standard Deviation	Number of Pupils	Mean	Standard Deviation	Number of Pupils
Word relationships	49.2	9.3	89	50.6	8.7	85
Reading	48.5	8.5	89	49.2	9.3	85
Mechanics of written English	49.3	9.3	87	48.0	9.5	85
Mathematics	50.6	8.5	87	48.2	10.3	85
Basic skills composite achievement	49.8	9.2	87	48.4	8.5	85

DISTRIBUTIONS OF COMPOSITE ACHIEVEMENT SCORES BY DECILE

	DECILES									
	1	2	3	4	5	6	7	8	9	10
Number of grade 4 scores	9	11	10	8	7	5	8	7	8	14
Number of grade 7 scores	10	8	10	12	9	8	7	6	7	8

* This measure is new since the 1970-71 educational assessment program

☐ This measure has been substantially changed since the 1970-71 educational assessment program.

1971-72 Michigan Educational Assessment Program

LOCAL SCHOOL REPORT

SCHOOL ABLE ELEMENTARY SCHOOL CODE 3487

DISTRICT MICHVILLE PUBLIC SCHOOL CODE 86-010

COMMUNITY TYPE III TOWNS

SIZE MEASURES: Total Membership 307

Grade 4 membership* 50 Grade 7 membership* _____

HUMAN RESOURCES

Professional instructional staff per 1,000 pupils ☐	48.8
Teachers per 1,000 pupils ☐	38.8
Average years teaching experience ☐	9.1 Yrs
Percent of teachers with master's degree or above	6.0%
Average contracted salary per teacher ☐	$9,200

STUDENT BACKGROUND

Percent of racial-ethnic minority students	39.1%
Composite estimate of socioeconomic status ☐	47.2

ACHIEVEMENT (PROVIDED SEPARATELY FOR GRADES 4 AND 7)

SCHOOL MEANS, STANDARD DEVIATIONS, AND NUMBER TESTED

	GRADE FOUR			GRADE SEVEN		
	Mean	Standard Deviation	Number of Pupils	Mean	Standard Deviation	Number of Pupils
Word relationships	50.1	9.7	49			
Reading	48.6	8.5	49			
Mechanics of written English	50.4	8.3	49			
Mathematics	48.6	7.5	49			
Basic skills composite achievement	49.7	8.8	49			

DISTRIBUTIONS OF COMPOSITE ACHIEVEMENT SCORES BY DECILE

	DECILES									
	1	2	3	4	5	6	7	8	9	10
Number of grade 4 scores	5	6	4	5	2	4	5	4	5	9
Number of grade 7 scores	*									

* This measure is new since the 1970-71 educational assessment program.

☐ This measure has been substantially changed since the 1970-71 educational assessment program.

TABLE III

Decile Distributions of Composite Achievement Scores

Information about each district's and school's composite achievement scores is presented in the form of decile distributions to show how many of the fourth and seventh grade pupils earned composite achievement scores in each decile of a statewide tabulation of pupils' scores. These decile distributions show how many of each district's and school's pupils scored in each of ten composite achievement levels. For most districts and schools, more or less than ten percent will actually fall into each decile. For example, districts and schools whose average scores are higher than the state average will tend to find larger percentages of their pupils falling into the higher deciles, and correspondingly smaller percentages into the lower deciles. In any event, the clustering of composite achievement scores for a grade will often prove to be of interest and of possible value in program planning.

SECTION III

NORM TABLES AND EDUCATION PROFILES

This section is divided into two parts. Part 1 describes the norm tables which accompany this booklet. Part 2 explains how the data presented in the district and school reports may be plotted onto the norm tables to develop district-level and school-level education profiles.

Part 1

Explanation of the Norm Tables

Local school officials will receive a total of six norm tables. District norm tables include test data from both the fourth grade and seventh grade for the first time this year. Separate school-level norm tables have been prepared for the fourth and seventh grades. The district and school norm tables are based on available statewide data or community type data for K-12 districts in operation as of January, 1972, as follows:

District Norm Tables

--Michigan, Grades 4 and 7

--Your community type, Grades 4 and 7

School Norm Tables

--Michigan, Grade 4

--Your community type, Grade 4

--Michigan, Grade 7

--Your community type, Grade 7

Data from the non K-12 districts have been eliminated from the computation of district and school norms this year. This step was taken because data from non K-12 districts have proved sometimes to be erratic or incomplete, particularly in the measures of human and financial resources, and their test results

were based on small numbers of pupils. In the past the erratic influence of means based on small numbers has been reduced by eliminating from the norms mean scores for districts and schools testing fewer than five pupils. As a result non K-12 districts have not been fully represented in the norms in the past. It seems preferable to exclude them entirely rather than to have them reflected in some columns and partially or not at all in others. Assessment results from these districts will continue to be reported in the Michigan Educational Assessment Program as they have in the past.

Please note that Tables IV and V are constructed with fictitious data and these tables should not be used by the local districts for plotting education profiles. Norm tables constructed with actual data are supplied on separate sheets to each district.

Table IV provides an example of a norm table constructed with fictitious statewide, district-level fourth and seventh grade data. Column 2 on this table indicates that the statewide median (50th percentile) at the district level for teachers per 1,000 pupils was 41.7. The 75th percentile was 45.0. In the bottom three rows of the table are the mean score, standard deviation, and the number of districts used in the preparation of each distribution. For example, the district-level mean for teachers per 1,000 pupils was 42.0, the standard deviation was 5.2, and 528 districts were used in determining these values. It should be noted that the numbers of districts in all columns are not equal. Variations are due to the unavailability of data for certain districts and to the exclusion from the norms of districts that tested fewer than five pupils.

TABLE

DISTRICT NORMS

	HUMAN RESOURCES					DISTRICT FINANCIAL RESOURCES						STUDENT BACKGROUND	
	(1) PROF. INSTRUCTIONAL STAFF PER 1,000 PUPILS	(2) TEACHERS PER 1,000 PUPILS	(3) AVERAGE YEARS TEACHING EXPERIENCE	(4) PERCENT TEACHERS WITH MASTERS DEGREE	(5) AVERAGE CONTRACTED SALARY OF TEACHERS	(6) S E V PER RESIDENT MEMBER (1970-71)	(7) LOCAL REVENUE PER PUPIL (70-71)	(8) STATE SCHOOL AID PER PUPIL (70-71)	(9) K-12 INSTRUCTIONAL EXPENSE PER PUPIL (1970-71)	(10) ELEMENTARY INSTRUCTIONAL EXPENSE PER PUPIL (1970-71)	(11) TOTAL CURRENT OPERATING EXPENSE PER PUPIL (1970-71)	(12) PERCENT OF RACIAL-ETHNIC MINORITY STUDENTS	(13) COMPOSITE ESTIMATE OF SOCIO ECONOMIC STATUS
PERCENTILE DISTRIBUTION 95	60.2											21.8	
90	55.2											10.4	
85	53.2											7.6	
80	51.5	46.1				19112						5.4	
75	50.5	45.0				17548						3.7	
70	49.4	44.2			10946	16338	419					3.1	
65		43.3			9833	15280	396					2.8	
60		42.9	10.7		9728	14468	374					2.0	50.2
55		42.1	10.3		9615	13487	353					1.4	49.8
50		41.7	9.9	18.9	9502	12837	338						49.6
45			9.5	17.6	9367		320				636		49.3
40			9.1	16.4	9222		301	324			625		49.0
35			8.7	14.8	9013			317	430	416	614		48.6
30				13.5				308	422	410	592		48.3
25				11.2				295	414	402	583		
20				9.7				280	403	384	571		
15				6.3				261	390	371	555		
10				1.8				226	377	346	526		
5									332	291			
MEAN	46.5	42.0	9.6	20.1	9116	15027	382	336	458	425	650	4.5	49.7
STANDARD DEVIATION	6.1	5.2	3.5	12.5	1251	11623	201	87	96	83	142	10.5	2.9
NUMBER OF DISTRICTS	528	528	528	528	528	528	528	528	528	528	528	528	520

FICTITIOUS DATA

IV

MICHIGAN

DROP-OUT RATE	ACHIEVEMENT (DISTRICT MEANS)										SIZE MEASURE
	GRADE 4					GRADE 7					
(14) SCHOOL DROPOUT RATE (1970-71)	(15) WORD RELATION-SHIPS	(16) READING	(17) MECHANICS OF WRITTEN ENGLISH	(18) MATHE-MATICS	(19) BASIC SKILLS COMPOSITE ACHIEVE-MENT	(15) WORD RELATION-SHIPS	(16) READING	(17) MECHANICS OF WRITTEN ENGLISH	(18) MATHE-MATICS	(19) BASIC SKILLS COMPOSITE ACHIEVE-MENT	(22) TOTAL MEMBER-SHIP
				51.4		51.4					
				51.1		50.9					
				50.7		50.6	50.6				1704
4.2	49.9		50.1	50.4	50.5	50.3	50.3	50.3	49.9	50.2	1568
3.8	49.7	50.3	49.7	50.1	50.1	50.0	49.9	50.0	49.7	49.8	1262
3.5	49.5	49.9	49.4	49.7	49.8	49.7	49.7	49.6	49.5	49.4	1118
3.2	49.2	49.7	49.1	49.3	49.5	49.5	49.4	49.2	49.2	49.0	873
2.8	48.8	49.1	48.8		49.1	49.0	49.0	48.8	49.0	48.7	706
2.4	48.1	48.5	48.2		48.5		48.4	48.3	48.6	48.0	540
	47.1	47.7	47.4		47.8		47.6	47.5	48.1	47.5	302
		46.6						46.3	46.5	46.7	
5.2	50.6	51.1	50.7	51.1	51.0	50.9	50.9	50.9	51.0	51.0	3551
2.8	2.9	2.7	2.9	2.9	2.7	2.8	2.8	2.9	2.8	2.7	11503
521	516	516	516	516	516	520	520	520	520	520	528

FICTITIOUS DATA

PERCENTILE DISTRIBUTION

95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5

Table V provides an example of a norm table constructed with fictitious statewide school-level fourth grade data.

Explanation of the Michville District-Level Education Profile

The line on Table IV is the fourth and seventh grade district-level education profile for Michville. The numbers that have been plotted are the Michville district-level means on the educational assessment measures. This district-level education profile for Michville (Table IV) was constructed as follows:

Step One. Michville's professional instructional staff per 1,000 pupils, 54.6, was taken from the Local District Report (see Table II).

Step Two. The point in the professional instructional staff per 1,000 pupils column of the district-level norm table corresponding to 54.6 was marked (see Table IV). Michville's rank on this measure was found to fall between 53.2 and 55.2, or at about the 88th percentile of the distribution of district means.

Step Three. Steps one and two were repeated for each measure listed in the Michville District Report. For example, Table IV shows that Michville had a score of 43.2 (about the 63rd percentile) on teachers per 1,000 pupils and 9.4 (about the 43rd percentile) on average years teaching experience.

Step Four. A line was drawn connecting the points plotted on the norm table (see Table IV). This line represents the way in which Michville means compare with the statewide distribution on each measure.

Explanation of the Michville School-Level Education Profiles

Michville's school-level education profiles (Table V) were prepared with information from the educational assessment measures gathered at the school building level (see Table I for the listing of school-level measures). Similar to the district data in Table IV, the numbers of schools in all columns are not

TABLE V

SCHOOL NORMS MICHIGAN

GRADE 4

PERCENTILE DISTRIBUTION	HUMAN RESOURCES (1) PROF. INSTRUCTIONAL STAFF PER 1,000 PUPILS	(2) TEACHERS PER 1,000 PUPILS	(3) AVERAGE YEARS TEACHING EXPERIENCE	(4) PERCENT TEACHERS WITH MASTERS DEGREE	(5) AVERAGE CONTRACTED SALARY OF TEACHERS	STUDENT BACKGROUND (12) PERCENT OF RACIAL-ETHNIC MINORITY STUDENTS	(13) COMPOSITE ESTIMATE OF SOCIO ECONOMIC STATUS	ACHIEVEMENT (SCHOOL MEANS) (15) WORD RELATIONSHIPS	(16) READING	(17) MECHANICS OF WRITTEN ENGLISH	(18) MATHEMATICS	(19) BASIC SKILLS COMPOSITE ACHIEVEMENT	SIZE MEASURE (22) TOTAL MEMBERSHIP
95	60.2					95.1							
90	54.4					40.8							
85	52.1					18.3							
80	49.8					10.2							
75	48.3					6.8							
70	47.2	41.2			9919	4.9							
65	45.9	40.2	11.5		9767	3.7							
60	44.8	39.5	10.9		9614	3.1		51.3		51.5			
55		38.9	10.3		9462	2.6		50.9		51.1			
50		38.3	9.8		9310			50.5		50.6		50.8	367
45		37.7	9.3		9163			50.0		50.1		50.4	345
40		37.3	8.8		9011		48.9	49.6	50.1	49.7	50.0	49.9	326
35			8.2	13.7	8868		48.4	49.2	49.6	49.2	49.5	49.5	306
30			7.6	11.2			48.0		49.0	48.7	48.8	48.9	283
25			7.1	9.8			47.3		48.3	48.1	48.1	48.4	259
20				7.4			46.5		47.5		47.3		
15				3.1			45.6		46.2		46.0		
10				0.3			44.3						
5				0.0			42.6						
MEAN	43.3	38.6	8.5	20.5	8929	12.0	49.9	50.3	50.4	50.3	50.4	50.4	407
STANDARD DEVIATION	6.4	5.0	3.3	15.4	1110	25.7	4.5	4.1	4.1	4.1	4.4	4.1	193
NUMBER OF SCHOOLS	2415	2415	2415	2415	2415	2415	2402	2406	2406	2406	2406	2406	2415

FICTITIOUS DATA

FICTITIOUS DATA

April, 1972

equal. Variations are due to the unavailability of data for certain schools and to the exclusion from the norms of schools that tested fewer than five pupils. The procedures used were as follows:

Step One: Able Elementary School's figure on professional instructional staff per 1,000 pupils, 48.8, was located on the Local School Report (see Table III).

Step Two: The appropriate point in the professional instructional staff per 1,000 pupils column of the statewide school norm table was found and marked (see Table V). The figure 48.8 was found to fall between 48.3 and 49.8, or near the 77th percentile.

Step Three: Steps one and two were repeated for the means on each variable listed for the Able Elementary School.

Step Four: A line was drawn on the school norm table connecting the points established in steps one, two and three. This line is the profile for Able Elementary School as compared to statewide school norms. The profiles of additional schools may be shown on the same table.

In the same manner, profiles can be drawn to compare Michville district and its schools with other districts and schools of the same community type, by using the community type norm tables provided.

Part 2

Uses of Education Profiles

The introduction to this booklet stated that construction of education profiles would enable school officials and citizens to identify the levels of educational performance and the levels of factors related to performance in a district and its schools in terms of the state as a whole, and in terms of other districts and schools of the same community type. Tables IV and V provide this information for Michville.

As an example of the potential uses of these data, Table IV indicates that fourth grade pupils in Michville school district, scored on the average, low on mathematics. This information could be used by the Michville school district officials as a general indicator of a subject area that might need closer examination. An analysis of the mathematics program (i.e., the district's delivery system for mathematics) would be conducted by the local school district. The results of the local analysis hopefully would indicate appropriate curricular and resource adjustments.

The construction of education profiles similar to those constructed for Michville will enable school officials and citizens throughout Michigan to gain a greater understanding of the relative standing of their district and its schools. This information along with other information will be helpful to local school officials as they make decisions about the allocation of educational resources and the design of curricula.

APPENDIX A

LISTING OF MICHIGAN SCHOOL DISTRICTS CLASSIFIED
BY MAJOR COMMUNITY TYPE SERVED

This list contains 620 school districts that were in existence as of September 30, 1971, classified by community type. Of these, 530 were organized to operate K-12 programs. The remainder, which are denoted by an asterisk (*), were not organized to operate a K-12 program in 1971-72.

DEFINITIONS

1. Metropolitan Core Cities:

Communities are classified as Metropolitan Core Cities if they meet at least one of the following criteria:

(a) the community is the central city of a Michigan Standard Metropolitan Statistical Area; or

(b) the community is an enclave within the central city of a Michigan Standard Metropolitan Statistical Area.

(c) the community was previously classified as a Metropolitan Core City.

Note: The U.S. Census Bureau defines the central city of a Standard Metropolitan Statistical Area as those cities named in the titles of the Standard Metropolitan Statistical Area. (See U.S. Department of Commerce, Statistical Abstract of the United States [Washington: Bureau of the Census, 1968], p. 2.)

2. Cities:

Communities are classified as Cities if they have a population of 10,000 or more and have not been classified as a Metropolitan Core City or Urban Fringe.

3. Towns:

Communities are classified as Towns if they have a population of 2,500 to 9,999. Rural communities impacted by large military installations nearby are also classified as Towns.

4. Urban Fringe:

Communities are classified as Urban Fringe, regardless of their size, if they meet at least one of the following criteria:

(a) the mailing address of the community is a Metropolitan Core City or a City unless it is on a RFD Route; or

(b) the community is within ten miles of the center of a Metropolitan Core City; or

(c) the community is within five miles of the center of a city.

5. Rural

Communities are classified as Rural if they have a population of less than 2,500, or if their address is an RFD Route of a Town, City, Urban Fringe, or Metropolitan Core, and they lie outside the perimeter defined above under Urban Fringe.

NOTE: No communities in Wayne County are classified rural.

These definitions of community types were arrived at in the Fall of 1971. They have been developed to make the classification as objective and consistent as possible without altering the basic principles of classification. All classifications have been made using 1970 census data and the most recent address available for each district.

The numbers preceding school district names are Department of Education county and school district code numbers. The first two digits refer to the county, and the remaining three digits refer to the school district within the county. A key to the county code numbers follows the lists.

COMMUNITY TYPE I - METROPOLITAN CORE

81-010	Ann Arbor City S D
13-020	Battle Creek City Schs
09-010	Bay City S D
82-010	Detroit City S D
25-010	Flint City S D
41-010	Grand Rapids City S D
82-060	Hamtramck City Schs
82-070	Highland Park City Schs
38-170	Jackson Union S D
39-010	Kalamazoo City S D
33-020	Lansing Pub S D
61-010	Muskegon City S D
61-020	Muskegon Heights City S D
63-030	Pontiac City S D
73-010	Saginaw City S D

COMMUNITY TYPE II - CITY

46-010	Adrian City S D
13-010	Albion City Schs
04-010	Alpena City S D
11-010	Benton Harbor City S D
54-010	Big Rapids Public Schs
63-010	Birmingham City S D
21-010	Escanaba Area Pub Schs
82-050	Garden City S D
70-010	Grand Haven City S D
70-020	Holland City S D
82-080	Inkster City S D
82-095	Livonia Public Schs
52-170	Marquette City S D
55-100	Menominee Area Pub Sch
56-010	Midland City S D
58-010	Monroe City Pub Schs
50-160	Mt Clemens Comm S D
37-010	Mt Pleasant City S D
11-300	Niles Comm S D
78-110	Owosso Pub S D
82-100	Plymouth Comm S D
74-010	Port Huron City S D
82-130	Romulus Comm Schs
17-010	Sault Ste Marie Area Schs
11-020	St. Joseph City S D
28-010	Traverse City Pub S D
82-170	Wyandotte City S D

COMMUNITY TYPE III - TOWN

74-030	Algonac Comm S D
03-030	Allegan Pub Schs
29-010	Alma Pub Schs
50-040	Anchor Bay S D
32-010	Bad Axe Pub Schs
34-080	Belding Area S D
27-010	Bessemer City S D
46-040	Blissfield Comm Schs
22-030	Breitung Twp S D
11-310	Buchanan Pub S D
83-010	Cadillac Area Pub Schs
79-020	Caro Comm Schs
15-050	Charlevoix Pub S D
23-030	Charlotte Pub Schs
16-015	Cheboygan Area Schs
81-040	Chelsea S D
73-110	Chesaning Union Schs
*32-040	Church Sch
18-010	Clare Pub Schs
12-010	Coldwater Comm Schs
*32-270	Colfax Twp S D 2
*32-290	Colfax Twp S D 6
14-020	Dowagiac Union Schs
78-030	Durand Area Schs
74-050	East China Twp S D
23-050	Eaton Rapids Pub Schs
25-100	Fenton Area Pub Schs
82-180	Flat Rock Comm Schs
73-190	Frankenmuth S D
62-040	Fremont Pub S D
69-020	Gaylord Comm Schs
82-290	Gibraltar S D
21-025	Gladstone Area Pub S D
59-070	Greenville Pub Schs
52-040	Gwinn Area Comm Schs
31-010	Hancock City S D

COMMUNITY TYPE III con't

80-120 Hartford Pub S D
08-030 Hastings Pub S D
30-020 Hillsdale Comm Schs
63-210 Holly Area S D
47-070 Howell Pub Schs
46-080 Hudson Area Schs
70-190 Hudsonville Pub S D
82-340 Huron S D
63-220 Huron Valley Schs
34-010 Ionia City S D
22-010 Iron Mountain City S D
27-020 Ironwood Area Schs
52-180 Ishpeming Pub S D
29-060 Ithaca Pub Schs
07-040 L'Anse Twp S D
25-200 Lake Fenton Sch
63-230 Lake Orion Comm S D
44-010 Lapeer Pub Schs
*32-390 Lincoln Twp S D 1 (closed)
41-170 Lowell Area Schs
53-040 Ludington Area S D
51-070 Manistee City Schs
77-010 Manistique Area Schs
13-110 Marshall Pub Schs
33-130 Mason Pub Schs
81-100 Milan Area Schs
*49-070 Moran Twp S D
02-070 Munising Pub Schs
52-090 Negaunee S D
11-200 New Buffalo Area S D
22-025 Norway Vulcan Area Schs
63-100 Novi Comm S D
35-010 Oscoda Area Schs
03-020 Otsego Pub Schs
63-110 Oxford Area Comm S D
80-160 Paw Paw Pub S D
24-070 Petoskey S D
03-010 Plainwell Comm Schs
31-110 Portage Twp S D
34-110 Portland Pub S D
50-180 Richmond Comm Schs
63-260 Rochester Comm S D
71-080 Rogers Union S D
50-190 Romeo Comm Schs
17-110 Rudyard Twp Sch
*32-610 Sigel Twp S D 3
80-010 South Haven Pub Schs
63-240 South Lyon Comm Schs
41-240 Sparta Area Schs
49-010 St Ignace City S D
19-140 St Johns Pub Schs
29-100 St Louis Pub Schs
75-010 Sturgis City S D
46-140 Tecumseh Pub Schs
75-080 Three Rivers Pub S D
15-025 Twin Valley Pub S D
82-430 Van Buren Pub Schs
79-150 Vassar Pub Schs
27-070 Wakefield Twp S D
63-290 Walled Lake Cons S D
61-240 White Hall Dist Schs
33-230 Williamston Comm Schs
70-350 Zeeland Pub S D

COMMUNITY TYPE IV - URBAN FRINGE

82-020 Allen Park Pub Schs
25-130 Atherton Comm S D
63-070 Avondale S D
09-030 Bangor Twp Schs
19-100 Bath Comm Schs
58-030 Bedford Pub S D
25-240 Beecher S D
25-060 Bendle Pub S D
25-230 Bentley Comm S D
63-050 Berkley City S D
63-080 Bloomfield Hills S D
11-210 Brandywine Pub S D
73-180 Bridgeport Comm S D
73-080 Buena Vista S D
56-020 Bullock Creek S D
25-080 Carman S D
73-030 Carrollton S D
50-010 Center Line Pub Schs
82-025 Cherry Hill S D
50-080 Chippewa Valley Schs
*52-020 Chocolay Twp S D
63-150 City of Troy S D

COMMUNITY TYPE IV - URBAN FRINGE con't

63-090 Clarenceville S D
63-270 Clawson City S D
50-070 Clintondale Pub Schs
39-030 Comstock Pub Schs
41-080 Comstock Park S D
78-100 Corunna Pub S D
82-230 Crestwood S D
25-140 Davison Comm Schs
19-010 De Witt Pub Schs
82-030 Dearborn City S D
82-040 Dearborn Heights S D 7
81-050 Dexter Comm S D
41-090 East Grand Rapids Pub Schs
50-020 East Detroit City S D
38-090 East Jackson Pub Schs
33-010 East Lansing S D
82-250 Ecorse Pub S D
09-050 Essexville Hampton S D
*82-210 Fairlane S D
63-200 Farmington Pub S D
63-020 Ferndale City S D
50-090 Fitzgerald Pub Schs
25-120 Flushing Comm Schs
41-110 Forest Hills Pub Schs
50-100 Fraser Pub Schs
*61-420 Fruitland Twp S D 1F
61-080 Fruitport Comm Schs
39-050 Galesburg Augusta Comm S D
25-070 Genesee S D
41-120 Godfrey Lee Pub S D
41-020 Godwin Heights Pub Schs
25-030 Grand Blanc Comm Schs
23-060 Grand Ledge Pub Schs
41-130 Grandville Pub Schs
38-050 Grass Lake Comm Schs
82-300 Grosse Ile Twp Schs
82-055 Grosse Pte Pub Schs
13-070 Harper Creek Comm Schs
82-320 Harper Woods City S D
33-060 Haslett Pub Schs
63-130 Hazel Park City S D
33-070 Holt Pub Schs
58-080 Jefferson Cons S D
70-175 Jenison Pub Schs
25-110 Kearsley Comm Schs
41-140 Kelloggsville Pub Schs
41-145 Kenowa Hills Pub Schs
41-160 Kentwood Pub Schs
50-140 L'Anse Creuse Pub Schs
50-120 Lake Shore Pub Schs
11-030 Lakeshore S D
13-090 Lakeview Cons S D
50-130 Lakeview Pub Schs
63-280 Lamphere Pub Schs
81-070 Lincoln Cons S D
82-090 Lincoln Park City Schs
63-140 Madison Heights S D
*52-060 Marquette Twp S D
74-100 Marysville Pub S D
82-045 Melvindale North Allen Park S D
38-120 Michigan Center S D
61-060 Mona Shores S D
25-040 Mt Morris Cons Schs
38-130 Napoleon S D
82-220 North Dearbron Heights S D
61-230 North Muskegon City S D
41-025 Northview Pub Sch
82-390 Northville Pub Schs
38-140 Northwest S D
63-250 Oak Park City S D
61-065 Oakridge S D
33-170 Okemos Pub Schs
*23-490 Oneida Twp Sch Dist 3
61-190 Orchard View Schs
39-130 Parchment S D
13-120 Pennfield S D
39-140 Portage Pub Schs
82-110 Redford Union S D
61-220 Reeths Puffer Schs
82-120 River Rouge City Schs
82-400 Riverview Comm S D
50-030 Roseville City S D
63-040 Royal Oak City S D
73-040 Saginaw Twp Comm Schs
81-120 Saline Area S D
50-200 South Lake Schs
82-140 South Redford S D
63-060 Southfield Pub S D
82-405 Southgate Comm S D
70-300 Spring Lake Pub S D
13-030 Springfield City S D
73-255 Swan Valley S D
25-180 Swartz Creek Comm S D
82-150 Taylor S D
82-155 Trenton Pub Schs
50-210 Utica Comm Schs
50-220 Van Dyke Comm Schs
38-020 Vandercook Lake Pub S D
50-230 Warren Cons Schs
50-240 Warren Woods Pub Schs

COMMUNITY TYPE IV - URBAN FRINGE con't

63-300 Waterford S D
33-215 Waverly Schs
82-160 Wayne-Westland Comm Schs
63-160 West Bloomfield Twp S D
70-070 West Ottawa Pub S D
38-010 Western S D
82-240 Westwood Comm Schs
25-210 Westwood Heights S D
81-140 Whitmore Lake Pub S D
81-150 Willow Run Pub Schs
82-365 Woodhaven S D
41-026 Wyoming Pub Schs
81-020 Ypsilanti City S D

COMMUNITY TYPE V - RURAL

31-020 Adams Twp S D
46-020 Addison Comm Schs
58-020 Airport Comm S D
79-010 Akron Fairgrove Schs
05-010 Alba Pub Sch
01-010 Alcona Comm Schs
70-040 Allendale Pub S D
*42-010 Allouez Twp Schs
44-020 Almont Comm Schs
*29-130 Arcada Twp S D 1F
*29-170 Arcada Twp S D 6
06-010 Arenac Eastern S D
50-050 Armada Area Schs
*07-010 Arvon Twp S D
29-020 Ashley Comm Schs
13-050 Athens Area Schs
60-010 Atlanta Comm Schs
06-020 Au Gres Sims S D
*02-010 Au Train Twp Sch
43-040 Baldwin Pub S D
21-040 Baldwin Twp Schs
80-020 Bangor Pub Schs
*80-240 Bangor Twp S D 8
07-020 Baraga Twp S D
21-090 Bark River Harris S D
37-040 Beal City S D
51-020 Bear Lake Sch
15-010 Beaver Island Comm Schs
26-010 Beaverton Rural Schs
05-040 Bellaire Pub Sch
23-010 Bellevue Comm Schs
*64-010 Benona Comm S D
10-015 Benzie County Central Schs
66-010 Bergland Comm S D
*34-140 Berlin Twp S D 3F
*34-150 Berlin Twp S D 5F
11-240 Berrien Springs Pub S D
*27-030 Bessemer Twp S D
21-065 Big Bay de Noc S D
*62-470 Big Jackson S D
73-170 Birch Run Area S D
*32-220 Bloomfield Twp S D 4
*32-230 Bloomfield Twp S D 5
*32-250 Bloomfield Twp S D 7F
80-090 Bloomingdale Pub S D
*49-020 Bois Blanc Pines S D
15-030 Boyne Falls Pub S D
63-180 Brandon Twp S D
29-040 Breckenridge Comm Schs
*49-030 Brevort Twp S D
11-340 Bridgman Pub Sch
47-010 Brighton Area Schs
17-140 Brimley Pub Schs
46-050 Britton Macon Area Sch
12-020 Bronson Comm S D
76-060 Brown City Comm S D
28-035 Buckley Comm S D
*44-190 Burnside Twp S D 10F
75-020 Burr Oak Comm S D
02-020 Burt Twp Sch
78-020 Byron Area Schs
41-040 Byron Center Pub Schs
41-050 Caledonia Comm Schs
31-030 Calumet Pub S D
*31-040 Calumet Twp S D 2
30-010 Camden Frontier Sch
*34-250 Campbell Twp S D 4
74-040 Capac Comm S D
55-010 Carney Nadeau Pub Schs
59-020 Carson City Crystal Area S D
76-070 Carsonville Comm S D
*03-250 Casco Twp S D 4
32-030 Caseville Pub Sch
79-030 Cass City Pub Schs
14-010 Cassopolis Pub Schs
41-070 Cedar Springs Pub Schs

COMMUNITY TYPE V - RURAL con't

15-035 Central Lake Pub Sch
59-125 Central Montcalm Pub Schs
75-030 Centreville Pub S D
52-010 Champion Humboldt Spurr S D
31-050 Chassell Twp S D
54-025 Chippewa Hills S D
*57-100 Clam Union Twp S D 2 (closed)
63-190 Clarkston Comm S D
39-020 Climax Scotts Comm Schs
46-060 Clinton Comm Schs
25-150 Clio Area S D
56-030 Coleman Comm S D
*32-260 Colfax Twp S D 1F
*32-300 Colfax Twp S D 7 (closed)
*54-100 Colfax Twp S D 3F
11-330 Coloma Comm Schs
75-040 Colon Comm S D
38-040 Columbia S D
38-080 Concord Comm Schs
75-050 Constantine Pub S D
70-120 Coopersville Pub S D
80-040 Covert Pub Schs
*07-030 Covington S D
20-015 Crawford Au Sable Schs
*24-010 Cross Village S D
76-080 Croswell Lexington Comm S D
33-040 Dansville Ag Sch
80-050 Decatur Pub Schs
76-090 Deckerville Comm S D
46-070 Deerfield Pub Schs
08-010 Delton Kellogg S D
17-050 De Tour Twp Sch
44-050 Dryden Comm Schs
58-050 Dundee Comm S D
*34-340 Easton Twp S D 6F
11-250 Eau Claire Pub S D
*13-060 Eckford Comm Schs
14-030 Edwardsburg Pub Schs
*64-020 Elbridge Comm S D
05-060 Elk Rapids Schs
32-050 Elkton Pigeon Bayport S D
15-065 Ellsworth Comm Sch
*31-070 Elm River Twp Sch
*52-030 Ely Twp S D
49-055 Engadine Cons Schs
67-020 Evart Pub Sch
66-045 Ewen Trout Creek Cons S D
*40-060 Excelsior Twp S D 1
68-030 Fairview S D
*57-010 Falmouth Elem S D
18-020 Farwell Area Schs
03-050 Fennville Pub Schs
*64-030 Ferry Comm S D
*28-060 Fife Lake Comm S D
36-015 Forest Park S D
19-070 Fowler Pub Schs
47-030 Fowlerville Comm Schs
10-025 Frankfort Area Schs
*13-340 Fredonia Twp S D 2F
73-200 Freeland Comm S D
53-030 Freesoil Comm S D
29-050 Fulton Schs
11-160 Galien Twp Sch
*03-440 Ganges Twp S D 4
*40-110 Garfield Twp S D 3F (closed)
72-010 Gerrish Higgins S D
26-040 Gladwin Comm Schs
45-010 Glen Lake Comm S D
80-110 Gobles Pub S D
*64-050 Golden Comm S D
*44-240 Goodland Twp S D 1
*44-260 Goodland Twp S D 2
25-050 Goodrich Area S D
62-050 Grant Pub S D
*42-030 Grant Twp Schs
*28-220 Green Lake Twp S D 1F
39-065 Gull Lake Comm Schs
*11-670 Hagar Twp S D 6
35-020 Hale Area Schs
03-100 Hamilton Comm Schs
*80-390 Hamilton Twp S D 6 (closed)
38-100 Hanover Horton Schs
32-060 Harbor Beach Comm Schs
24-020 Harbor Springs S D
18-060 Harrison Comm Schs
64-040 Hart Pub S D
47-060 Hartland Cons Sch
73-210 Hemlock Pub S D
62-060 Hesperia Comm S D
60-020 Hillman Comm Schs
61-120 Holton Pub Schs
13-080 Homer Comm Schs
03-070 Hopkins Pub Sch
72-020 Houghton Lake Comm Schs
58-070 Ida Pub S D
44-060 Imlay City Comm Schs
16-050 Inland Lakes S D
*34-360 Ionia Twp S D 2F
*34-380 Ionia Twp S D 5
*52-050 Ishpeming Twp S D
69-030 Johannesburg Central Sch
30-030 Jonesville Comm Schs

COMMUNITY TYPE V - RURAL con't

51-045 Kaleva Norman Dickson Schs
40-040 Kalkaska Pub Schs
41-150 Kent City Comm Schs
28-090 Kingsley Area S D
79-080 Kingston Comm Schs
78-040 Laingsburg Comm S D
57-020 Lake City Area S D
31-130 Lake Linden Hubbell S D
59-090 Lakeview Comm Schs
25-280 Lakeville Comm S D
34-090 Lakewood Pub Schs
80-130 Lawrence Pub S D
80-140 Lawton Comm S D
45-020 Leland Pub S D
49-040 Les Cheneaux Comm S D
33-100 Leslie Pub Schs
*02-050 Limestone Twp Sch
25-250 Linden Comm S D
30-040 Litchfield Comm Schs
24-030 Littlefield Pub S D
49-110 Mackinac Island Pub S D
16-070 Mackinaw City Pub Schs
46-090 Madison Sch
05-070 Mancelona Pub Sch
81-080 Manchester Pub S D
83-060 Manton Cons S D
23-065 Maple Valley S D
14-050 Marcellus Comm Schs
27-060 Marenisco S D
67-050 Marion Pub Sch
*13-095 Mar-Lee Cons S D
76-140 Marlette Comm S D
03-060 Martin Pub Schs
53-010 Mason County Central S D
53-020 Mason County Eastern S D
58-090 Mason Cons S D
02-060 Mathias Twp Sch
80-150 Mattawan Cons S D
79-090 Mayville Comm Schs
57-030 McBain Rural Ag S D
74-120 Memphis Comm Schs
75-060 Mendon Comm S D
56-050 Meridian Pub S D
73-230 Merrill Comm S D
83-070 Mesick Cons S D
79-100 Millington Comm Schs
68-010 Mio Au Sable S D
59-045 Montabella Comm S D
61-180 Montague Pub Schs
25-260 Montrose Twp Schs
46-100 Morenci Area Schs
54-040 Morley Stanwood Comm Schs
78-060 Morrice Area Schs
*75-300 Mottville Twp S D 3F
52-080 National Mine S D
50-170 New Haven Comm Schs
78-070 New Lothrop Area Pub S D
62-070 Newaygo Pub S D
30-050 North Adams Pub Schs
44-090 North Branch Area Schs
55-115 North Central Area Schs
22-045 North Dickinson County S D
32-080 North Huron Schs
*34-480 North Plains Twp S D 1F
45-040 Northport Pub S D
*75-100 Nottawa Comm Schs
*40-140 Oliver Twp S D 2
23-080 Olivet Comm Schs
71-050 Onaway Area Comm S D
51-060 Onekema Cons Sch
46-110 Onsted Comm Schs
66-050 Ontonagon Area Schs
*34-530 Orange Twp S D 5 (closed)
*34-600 Orleans Twp S D 9
*34-610 Orleans Twp S D 10
31-100 Osceola Twp S D
19-120 Ovid Elsie Area Schs
32-090 Owendale Gagetown Area S D
*34-040 Palo Comm S D
76-180 Peck Comm Sch
24-040 Pellston Pub S D
64-070 Pentwater Pub S D
78-080 Perry Pub S D
19-125 Pewamo Westphalia Comm S D
17-090 Pickford Pub Schs
47-080 Pinckney Comm Schs
09-090 Pinconning Area Schs
67-055 Pine River Area Schs
*62-080 Pineview S D
30-060 Pittsford Rural Ag Schs
32-120 Port Austin Pub Schs
32-130 Port Hope Comm Schs
*34-710 Portland Twp S D 5F
71-060 Posen Cons S D
23-090 Potterville Pub Schs
*52-100 Powell Twp S D
12-040 Quincy Comm S D
21-060 Rapid River Pub Schs
61-210 Ravenna Pub Schs
30-070 Reading Comm Schs
*32-140 Red Sch
67-060 Reed City Pub Schs

COMMUNITY TYPE V - RURAL con't

79-110	Reese Pub Schs
52-110	Republic Michigamme Schs
11-033	River Valley S D
21-130	Rock Pub S D
02-080	Rock River Twp Sch
41-210	Rockford Pub Schs
*34-750	Ronald Twp S D 8 (closed)
*23-590	Roxand Twp S D 12
46-130	Sand Creek Comm Schs
*52-130	Sands Twp S D
76-210	Sandusky Comm S D
*76-710	Sanilac Twp S D 1
34-120	Sarananc Comm S D
03-080	Saugatuck Pub Schs
39-160	Schoolcraft Comm Schs
*34-800	Sebewa Twp S D 8
79-145	Sebewaing Unionville Schs
*29-790	Seville Twp S D 4F
64-080	Shelby Pub S D
37-060	Shepard Pub S D
*32-530	Sheridan Twp S D 4
*32-540	Sheridan Twp S D 5
*32-620	Sigel Twp S D 4
*32-630	Sigel Twp S D 6
*11-830	Sodus Twp S D 5
*40-020	South Boardman Area Sch
38-150	Springport Pub Sch
73-240	St Charles Comm S D
*49-100	St Ignace Twp S D
06-050	Standish Sterling Comm S D
*31-140	Stanton Twp S D
55-120	Stephenson Area Pub Schs
33-200	Stockbrige Comm Schs
58-100	Summerfield S D
45-050	Suttons Bay Pub S D
48-040	Tahquamenon Area Schs
35-030	Tawas Area Schs
13-130	Tekonsha Comm Sch
08-050	Thornapple Kellogg S D
59-080	Tri-County Area Schs
32-170	Ubly Comm Schs
13-135	Union City Comm S D
69-040	Vanderbilt Area Sch
*32-650	Verona Twp S D 1F
59-150	Vestaburg Comm Schs
39-170	Vicksburg Comm Schs
30-080	Waldron Area Schs
64-090	Walkerville Rural Comm S D
27-080	Watersmeet Twp S D
11-320	Watervliet S D
03-040	Wayland Union Schs
*64-095	Weare Crystal Comm S D
33-220	Webberville Pub Schs
*52-160	Wells Twp S D
65-045	West Branch Rose City Area Schs
36-025	West Iron County S D
62-090	White Cloud Pub Schs
66-070	White Pine S D
75-070	White Pigeon Comm S D
17-160	Whitefish Sch
58-110	Whiteford Ag S D
35-040	Whittmore Prescott Area S D
16-100	Wolverine Comm S D
74-130	Yale Pub S D

COUNTY CODE NUMBERS

01	Alcona	43	Lake
02	Alger	44	Lapeer
03	Allegan	45	Leelanau
04	Alpena	46	Lenawee
05	Antrim	47	Livingston
06	Arenac	48	Luce
07	Baraga	49	Mackinac
08	Barry	50	Macomb
09	Bay	51	Manistee
10	Benzie	52	Marquette
11	Berrien	53	Mason
12	Branch	54	Mecosta
13	Calhoun	55	Menominee
14	Cass	56	Midland
15	Charlevoix	57	Missaukee
16	Cheboygan	58	Monroe
17	Chippewa	59	Montcalm
18	Clare	60	Montmorency
19	Clinton	61	Muskegon
20	Crawford	62	Newaygo
21	Delta	63	Oakland
22	Dickinson	64	Oceana
23	Eaton	65	Ogemaw
24	Emmet	66	Ontonagon
25	Genesee	67	Osceola
26	Gladwin	68	Oscoda
27	Gogebic	69	Otsego
28	Grand Traverse	70	Ottawa
29	Gratiot	71	Presque Isle
30	Hillsdale	72	Roscommon
31	Houghton	73	Saginaw
32	Huron	74	St. Clair
33	Ingham	75	St. Joseph
34	Ionia	76	Sanilac
35	Iosco	77	Schoolcraft
36	Iron	78	Shiawassee
37	Isabella	79	Tuscola
38	Jackson	80	Van Buren
39	Kalamazoo	81	Washtenaw
40	Kalkaska	82	Wayne
41	Kent	83	Wexford
42	Keweenaw		

APPENDIX B

DEFINITIONS OF THE EDUCATIONAL ASSESSMENT MEASURES

For the reader's information, the 22 measures reported in the 1971-72 Michigan Educational Assessment Program are defined below. Three measures, elementary instructional expense per pupil, Grade 4 membership, and Grade 7 membership, were added since the 1970-71 assessment program. The title word relationships, in the achievement measures, was formerly vocabulary; and total membership, in the size measures, replaces the 1970-71 measures called number of students in school, reported at the school level, and district state aid membership, reported at the district level.

Seven measures have been substantially changed since the 1970-71 educational assessment program. These measures are listed and the changes explained below:

1. Professional instructional staff per 1,000 students. This was pupil/professional instructional staff ratio in the 1970-71 assessment program. Information used to compute the measure is unchanged. Only the method of computation is changed. To convert professional instructional staff per 1,000 students to pupil/professional instructional staff ratio, divide the figure for professional instructional staff per 1,000 students into 1 and multiply the result by 1,000. For example, if the professional instructional staff per 1,000 students is equal to 40.0, the pupil/professional instructional staff ratio will be 25.0; $(1 \div 40.0) \times 1000 = 25.0$.

2. Teachers per 1,000 students. This measure was formerly pupil/teacher ratio. The explanation of the change is the same as that above. The formula given above can be used for converting from teachers per 1,000 students to pupil/teacher ratio.

3. Average years teaching experience. This measure has been updated to use most recent available information. The 1970-71 assessment program used information from the 1969-70 teacher certification records for computing this measure. Information from the 1971-72 "Fourth Friday Report" was used for the 1971-72 computation.

5. Average contracted salary per teacher. Information for this measure, too, has been updated so that contracted salary figures for 1971-72 could be used in the 1971-72 assessment program. Only full time classroom teachers are counted in computing the 1971-72 average. The 1970-71 assessment program used information from 1969-70 district financial reports for computing this measure. Information from the 1971-72 "Fourth Friday Report" was used for the 1971-72 computation.

13. Composite estimate of socioeconomic status. This measure has been changed from students' estimate of socioeconomic status. The title reflects the change in method of arriving at an estimate of socioeconomic status.

14. School dropout rate. This measure has been updated by two years. Information used is from the 1970-71 School Dropout Report. This provides the dropout rate for the 1970-71 academic year. The 1970-71 educational assessment program used dropout data for the 1968-69 academic year.

22. Total membership. This measure replaces number of students in school at the school level, and district state aid membership at the district level, in the 1970-71 assessment program. It reflects the number of full time students in all grades operated by the district from kindergarten through grade twelve, except special education students. The count was taken as

of the "Fourth Friday" of the 1971-72 academic year, and aggregated at the school and district levels. The 1970-71 figures included part time students on a full time equivalency basis. The 1970-71 number of students in school did not include kindergarten pupils.

A. Human Resources

Five human resource measures were included in the 1971-72 educational assessment program: (1) professional instructional staff per 1,000 pupils; (2) teachers per 1,000 pupils; (3) average years teaching experience; (4) percent of teachers with master's degree; and (5) average contracted salary of teachers. Each measure is described below.

1. Professional instructional staff per 1,000 pupils. The information to compute this measure was taken from the 1971 "Fourth Friday Report." The total number of professional instructional staff was obtained by adding the number of elementary and secondary staff (expressed as full time equivalency) in the following categories; principals, assistant principals, other administrators, (excluding district-wide administrative staff), consultants and supervisors, classroom teachers, librarians, audio-visual staff, guidance personnel and school counselors, psychological staff, radio and television instructional staff, teachers of the homebound, and other instructional staff. The total number of pupils was obtained by counting all pupils enrolled in grades one through twelve except special education pupils. Pupils who attended the school for a portion of the day and attended a non-public school for the remainder of the day were included on a full time equivalency basis. For example, a pupil who attended the school for one-fourth of each day and attended a non-public school for the other three-fourths of each day was counted as one-fourth pupil. In order to obtain the number of professional

instructional staff per 1,000 pupils, the total number of professional instructional staff was multiplied by 1,000 and divided by the total number of pupils.

2. Teachers per 1,000 pupils. The information to compute this measure was taken from the 1971 "Fourth Friday Report." The total number of teachers was obtained by adding the number of elementary and secondary classroom teachers. Kindergarten teachers, special education teachers, and non-classroom teachers were not included in the total. The total number of pupils was obtained by counting all pupils enrolled in grades one through twelve except special education pupils. Pupils who attended the school for a portion of the day and attended a non-public school for the remainder of the day were included on a full time equivalency basis. In order to obtain the number of teachers per 1,000 pupils, the total number of teachers was multiplied by 1,000 and divided by the total number of pupils.

3. Average years teaching experience. The information to compute this measure was taken from the 1971 "Fourth Friday Report." Excluded from the calculation of average years teaching experience were individuals who were employed to work exclusively in the areas of administration, special education, adult education, guidance and counseling, and nursery work. All other professional personnel employed by the district were included in calculating average years of teaching experience. The average was obtained by dividing the total years of teaching experience by the total number of teachers (full time and part time).

4. Percent of teachers with master's degree. The information to compute this measure was taken from the 1971 "Fourth Friday Report." It was obtained by dividing the number of classroom teachers (full time and part time) who had

completed all of the requirements for a master's degree by the total number of classroom teachers (full time and part time). The resultant value was multiplied by 100 to convert to a percent figure.

5. Average contracted salary of teachers. The information necessary to compute this measure was taken from the 1971 "Fourth Friday Report." It was obtained by dividing the total annual contractual salaries paid to full-time classroom teachers who work only in a school by the number of such teachers in that school. Excluded were supplemental payments such as payments for coaching, summer school, department head bonus, etc. District level averages were obtained by adding the total annual contractual salaries for all schools in the district and dividing by the sum of full-time classroom teachers in all schools in the district. (see note at end of appendix).

B. School District Financial Resources

Six district financial resources were included in the 1971-72 educational assessment program: (6) state equalized valuation per resident member; (7) local revenue per pupil; (8) state school aid per pupil; (9) K-12 instructional expense per pupil; (10) elementary instructional expense per pupil, and (11) total current operating expense per pupil. These measures are available at the district level only and are based on 1970-71 data. Each measure is described in detail below.

6. State equalized valuation per resident member (1970-71). The information to compute this measure was taken from records filed with the Michigan Department of Education. The total state equalized valuation (SEV) is equal to approximately 50 percent of the fair cash value of the real and personal property in the district. It is calculated as of May 25, 1970 (the

fourth Monday in May) and applied to the 1970-71 academic year. In order to obtain a per pupil value for SEV, the total SEV was divided by resident membership for the 1970-71 academic year. Resident membership, obtained from the 1970-71 "Fourth Friday Report," includes all pupils residing in the district who attended public school in that district or in any other district; resident membership excludes pupils who attended school in the district but resided in another district, as well as excluding pupils who attended private or parochial schools.

7. Local revenue per pupil (1970-71). The information to compute this measure was taken from records provided by the local districts and filed with the Michigan Department of Education. The financial information was reported in the Annual School District Financial Report for the fiscal year which ended June 30, 1971. The total value for local revenue included revenue from sources such as the following: property tax (the major source of local revenue), local government appropriations, tuition, transportation fees, revolving funds (i.e., revenue from food services, book stores, and student body activities), rent from school facilities, etc. Tuition from community college patrons was not included in the calculation. In order to obtain local revenue per pupil, total local revenue was divided by the state aid membership (the total number of pupils enrolled in the district as of October 2, 1970, the fourth Friday after Labor Day).

8. State school aid per pupil (1970-71). The information to compute this measure was taken from records provided by the local districts and filed with the Michigan Department of Education. The financial data were taken from the Annual School District Financial Report for the fiscal year which ended June 30, 1971. The value for total state school aid represented the direct

appropriations from the state, including appropriations for state school aid, driver education, underprivileged children, and other state grants. In order to compute the state school aid per pupil, the total state school aid was divided by 1970-71 state aid membership.

9. K-12 instructional expense per pupil (1970-71). The information to compute this measure was taken from records provided by the local districts and filed with the Michigan Department of Education. The financial information was reported in the Annual School Financial Report for the fiscal year which ended June 30, 1971. The total K-12 instructional expense included expenditures for salaries and supplies connected with elementary education, secondary education, special education, summer school, and adult education. Expenditures associated with community colleges were omitted from the calculation. In order to obtain a value for instructional expense per pupil, total K-12 instructional expense was divided by the 1970-71 state aid membership.

10. Elementary instructional expense per pupil (1970-71). The information to compute this measure was taken from financial reports provided by the local districts and filed with the Michigan Department of Education. Financial information was reported in the Annual School District Financial Report for the fiscal year which ended June 30, 1971. The elementary instructional expense included expenditures for salaries and supplies connected with elementary education. In order to obtain a value for elementary instructional expense per pupil for districts organized to operate a high school, total elementary instructional expense was divided by the elementary state aid membership, taken from the 1970-71 "Fourth Friday Report." For districts not

organized to op rate a high school (i.e., those that operate no grade above grade 8) total elementary instructional expense was divided by the K-8 state aid membership. Pre-kindergarten and special education pupils were not included.

11. Total current operating expense per pupil (1970-71). The information to compute this measure was taken from records provided by the local districts and filed with the Michigan Department of Education. The financial information was reported in the Annual School District Financial Report for the fiscal year which ended June 30, 1971. The total current operating expense included expenses connected with administration, attendance, health services, pupil transportation, plant operation, plant maintenance, and fixed charges, in addition to instructional expenses (including elementary, secondary, special education, summer school, and adult education instructional expenses). Community college expenses were not included in the computation of total operating expense. The value for total current operating expense was divided by the 1970-71 state aid membership.

C. Student Background

Two measures of student background were included in the 1971-72 educational assessment program: (12) percent of racial-ethnic minority students, and (13) composite estimate of socioeconomic status.

12. Percent of racial-ethnic minority students. Percent of racial-ethnic minority students was computed for each school in the state. The information to compute this measure was taken from the 1971 "Fourth Friday Report." The total number of racial-ethnic minority students included all racial-ethnic minority students in the school except pre-kindergarten students. Kinder-

garten students, special education students and part-time students were all included in the total. Since the information was expressed in terms of a head count, part time students were not counted differently from full time students. Students were classified as belonging to a racial-ethnic minority group if they were considered by the school to be of that group. The total number of students included all students except pre-kindergarten students. Again kindergarten students, special education students, and part time students were included in the total. In order to calculate the percent of racial-ethnic minority students, the total number of racial-ethnic minority students was divided by the total number of students and the resultant figure was multiplied by 100.

13. Composite estimate of socioeconomic status. A composite estimate of socioeconomic status was computed for each school in the state based upon one or both of the following: (1) questions included in the 1970-71 battery designed to indirectly assess group socioeconomic background; and (2) a principal's questionnaire. The questions included in No. 1 above concerned biographical information, educational attainment of parents, quality of housing, family structure and stability, occupation, income, and possessions. For this measure, the questions asked of the fourth graders and the questions asked of the seventh graders were identical. It is important to note that the students responded anonymously to these questions; only the school name--not the student's name--was recorded on the answer sheet. Thus, it is impossible for anyone to ascertain the responses of a particular individual. Indeed, the purpose of the instrument was to arrive at a group measure, not individual pupil measures. The principal's questionnaire asked for estimates

of parent educational and occupational levels and income. Also included were questions dealing with cost, quality, and density of housing, family structure and stability, and percent of families on welfare. Two additional questions were included to obtain estimates of the extent and nature of changes in average socioeconomic status in the school attendance area since the previous year.

D. Dropout Rate (1970-71)

14. School dropout rate. School dropout rate was computed from information taken from records provided by the local districts and filed with the Michigan Department of Education. The measure was based on figures from the local districts' School Dropout Report and enrollment of students in grades 9-12 during the 1970-71 academic year. Included as dropouts were students who left school for any of the following reasons: married, sent to corrective institutions, accepted employment, or dropped from attendance roll because absent 10-30 days. Not included as dropouts were students who left the district because they transferred to another district, were sent to institutions for defectives, or the student was sick or died. The dropout rate is calculated by dividing the number of dropouts by the sum of the number of students enrolled in grades 9-12 on the "Fourth Friday" plus new students enrolled during the year, computed from the 1970-71 School Dropout Report. The resultant figure was multiplied by 100.

E. Achievement

Performance on the basic skills portion was determined by measuring the following: (15) word relationships; (16) reading; (17) mechanics of written English; (18) mathematics; and (19) composite achievement. The number of items and time limits are indicated in the description of each test, which follows.

School Districts were asked to administer the tests between January 3 and January 21, 1972. Additional technical information concerning these measures will be provided in a future educational assessment report.

15. Word relationships. The word relationship test for grade four contained 45 verbal analogy problems which were designed to measure students' knowledge of the meaning of words and the relationships between words and concepts. The seventh grade test, while similar in purposes and content, contained 50 problems which were on the average more difficult. The time allowed to work on this section was 20 minutes at both grades.

16. Reading. The reading test contained 50 questions which assessed paragraph comprehension, ability to understand words from the context in which they are encountered, and ability to identify the correct synonym for a word. Students at both grade levels were allowed 35 minutes to work on this section.

17. Mechanics of written English. The mechanics of written English test consisted of four parts, each separately timed. In part A, spelling, students were to identify misspelled words. The fourth grade test presented 15 items to be completed in five minutes; the seventh grade test had 20 items and allowed six minutes. In part B, effectiveness of written expression, students were required to select the best way of expressing a thought. The test contained 14 items for each grade and nine minutes were allowed for its completion. In part C of the fourth grade test, written usage, students were to recognize grammatical errors. It contained 14 items and was timed for eight minutes. In part D of the fourth grade test (part C in the seventh grade test), punctuation and capitalization, students were to identify

errors of punctuation and capitalization. Part D of the fourth grade test presented 12 items to be completed in eight minutes, and part C of the seventh grade test presented 20 items to be completed in eleven minutes.

18. Mathematics. The mathematics test involved mathematical reasoning, problem solving, and computation. In addition, problems in the seventh grade test involved algebraic and geometric concepts. Each grade had 30 minutes in which to answer 40 questions.

19. Basic skills composite achievement. A composite achievement score was computed for each student. The composite score was obtained by averaging the individual's standard score on reading, the mechanics of written English, and the mathematics tests. The test scores were averaged in such a way that each score contributed equally to the average--despite the fact that the number of items was different on the three tests. IT SHOULD BE NOTED THAT THE WORD RELATIONSHIPS TEST SCORE WAS NOT INCLUDED IN THE CALCULATION OF THE COMPOSITE ACHIEVEMENT SCORE. The word relationships score is believed to respond more slowly to the influence of schooling. Therefore, the word relationships score was excluded to focus the composite achievement score upon those aspects of achievement that respond more readily to change.

F. Size Measures

Grade 4 membership, grade 7 membership, and total membership counts were provided as measures of school and district size. The district membership figures were obtained by adding the membership counts for all schools in the district. Pupils who attended school for a portion of the day were not included. These size measures were taken from the 1971 "Fourth Friday Report,"

School Summary, Page 1, Line 1A.

20. Grade 4 membership. Grade 4 membership was obtained by counting all full time pupils enrolled in grade 4 except special education pupils.

21. Grade 7 membership. Grade 7 membership was obtained by counting all full time pupils enrolled in grade 7 except special education pupils.

22. Total membership. Total membership was obtained by counting all full time pupils in all grades operated by the district from kindergarten through the 12th grade, except special education pupils.

Note: The information used to compute average contracted salary of teachers was collected during the President's wage-price freeze declared on August 14, 1971. We are unable to determine what effect if any the freeze had on the quality of the salary data collected.